

What is claimed is

1. A method of interpreting a pronoun reference comprising the steps of:
 - A) recognizing a user input as containing a recognized pronoun reference;
 - B) associating a historical listing of noun references with an associated pronoun preference;
 - C) comparing said recognized pronoun reference to at least one of said associated pronoun preferences; and
 - D) selecting one of said noun references of said historical listing as a function of said comparison between said recognized pronoun reference and at least one of said associated pronoun preferences.

2. A method according to claim 1 wherein in step B), the associated pronoun preference is determined as a function of historical usage of a pronoun with respect to the noun reference.

15

3. A method according to claim 2 wherein said historical usage includes maintaining a count of correct usage events of a given pronoun with respect to a given noun reference.

20

4. A method according to claim 1 wherein in step D), said noun reference is selected based upon a match of said recognized pronoun reference with at least one of said associated pronoun preferences.

5. A method according to claim 1 wherein in step C), said recognized pronoun reference is compared to at least one of said associated pronoun preferences in order from most recent to least recent in said historical listing.

5 6. An apparatus for interpreting a pronoun reference comprising:
a recognizer adapted for recognizing a user input as containing a recognized pronoun reference;
a historical listing of noun references with an associated pronoun preference;
means for comparing a recognized pronoun reference to at least one of said associated
10 pronoun preferences; and
means for selecting one said noun references of said historical listing as a function of
said comparison between said recognized pronoun reference and at least one of said
associated pronoun preferences.

15 7. An apparatus according to claim 6 further comprising
means for determining an associated pronoun preference as a function of historical usage of a
pronoun with respect to the noun reference.

8. An apparatus according to claim 7 wherein said historical listing includes a
20 count of correct usage events of a given pronoun with respect to a given noun reference.

9. An apparatus according to claim 6 wherein said noun reference is selected
based upon a match of said recognized pronoun reference with at least one of said associated
pronoun preferences.

10. An apparatus according to claim 6 wherein said recognized pronoun reference is compared to at least one of said associated pronoun preferences in order from most recent to least recent of the noun's references in said historical listing.

5 11. A method of interpreting a pronoun reference in a voice user interface comprising the steps of:

- A) recognizing a user utterance as containing a recognized pronoun reference;
- B) associating a historical listing of at least one noun reference with an associated pronoun preference;
- C) comparing said recognized pronoun reference to at least one of said associated pronoun preferences; and
- D) selecting a record from a database corresponding to one said noun reference of said historical listing as a function of said comparison between said recognized pronoun reference and at least one of said associated pronoun preferences.

15 12. A method according to claim 11 wherein in step B), the associated pronoun preference is determined as a function of historical usage of a pronoun with respect to the noun reference.

20 13 A method according to claim 12 wherein said historical usage includes maintaining a count of correct usage events of a given pronoun with respect to a given noun reference.

14. A method according to claim 11 wherein step C) includes comparing said recognized pronoun reference to at least one of said associated pronoun preferences in chronological order from most recent to least recent.

5 15. A method according to claim 11 further comprising the step of:
E) placing a telephone call to a telephone number in said selected record of said database.

10 16. A method according to claim 11 further comprising the step of:
E) sending an electronic message to an address in said selected record of said database.

15 17. An apparatus for interpreting a pronoun reference in a voice user interface comprising:
a recognizer adapted for recognizing a user input as containing a recognized pronoun reference;
a historical listing of at least one noun reference with an associated pronoun preference;
means for comparing a recognized pronoun reference to at least one of said associated pronoun preferences; and
means for selecting a record from a database correspond to one said noun references of said historical listing as a function of said comparison between said recognized pronoun reference and at least one of said associated pronoun preferences.

18. An apparatus according to claim 17 further comprising:

means for determining an associated pronoun preference as a function of historical usage of a pronoun with respect to the noun reference.

5 19. An apparatus according to claim 18 wherein said historical usage includes a count of correct usage events of a given pronoun with respect to a given noun reference.

10 20. An apparatus according to claim 17 wherein said recognized pronoun reference is compared to at least one of said associated pronoun preferences in chronological order from most recent to least recent.

15 21. An apparatus according to claim 17 further comprising:
means for placing a telephone call to a telephone number in said selected record of said database.

22. An apparatus according to claim 17 further comprising:
means for sending an electronic message to an address in said selected record of said database.

20 23. A method of establishing a pronoun preference to a noun identifier in a database comprising the steps of:

- A) establishing at least one pronoun preference field in a pronoun database corresponding to a reference noun identifier in a reference database;
- B) searching for information indicative of a pronoun preference; and

C) assigning said pronoun preference field a designation indicative of a first pronoun designation.

24. A method according to claim 23 wherein step B) includes searching a record
5 corresponding to said reference noun identifier in said reference database.

25. A method according to claim 23 wherein step B) includes searching a plurality of records, in said reference database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun preference.

10

26. A method according to claim 23 wherein step B) includes searching a plurality of records, in a default pronoun designation database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun preference.

15

27. A method according to claim 23 wherein step A) includes establishing a masculine pronoun preference field and a feminine pronoun preference field.

28. A method according to claim 27 wherein said masculine pronoun preference is “him” and said feminine pronoun preference is “her.”

20

29. A method according to claim 23 wherein step A) includes establishing a singular pronoun preference field and a plural pronoun preference field.

25

30. A method according to claim 29 wherein said singular pronoun preference is “it” and said plural pronoun preference is “them.”

31. A system for establishing a pronoun preference to a noun identifier in a database comprising:

a pronoun preference database including at least one pronoun preference field
5 corresponding to a reference noun identifier in a reference database;
means for searching for information indicative of a pronoun preference; and
means for assigning said pronoun preference field a designation indicative of a first
pronoun designation.

10 32. A system according to claim 31 further comprising means for searching a record corresponding to said reference noun identifier in said reference database.

15 33. A system according to claim 31 further comprising means for searching a plurality of records, in said reference database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun preference.

20 34. A system according to claim 31 further comprising means for searching a plurality of records, in a default pronoun designation database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun preference.

35. A system according to claim 31 wherein said pronoun preference database includes a masculine pronoun preference field and a feminine pronoun preference field.

36. A system according to claim 31 wherein said masculine pronoun preference is “him” and said feminine pronoun preference is “her.”

37. A system according to claim 31 wherein said pronoun reference database
5 includes a singular pronoun preference field and a plural pronoun preference field.

38. A system according to claim 31 wherein said singular pronoun preference is “it” and said plural pronoun preference is “them.”

10 39. A system providing for user interaction comprising:
a voice personal assistant adapted to presenting prompts to and receiving responses
from a user;
said voice personal assistant including a recognizer adapted for recognizing responses
that include pronouns, received from the user;
15 means for maintaining a historical list of noun references;
means for associating at least one associated pronoun preference with at least one
noun reference in said historical list;
means for comparing a recognized pronoun with at least one of said associated
pronoun preferences;
20 an application adapted for performing at least one function for said user;
means for selecting one of said noun references of said historical listing as a function
of a comparison between a recognized pronoun with at least one of said associated pronoun
preferences; and
utilizing a selected one of said noun references in performing a function of said
25 application.

40. A system providing for user interaction comprising:
- a voice personal assistant adapted to presenting prompts to and receiving responses from a user;
- 5 said voice personal assistant including a recognizer adapted for recognizing responses that include pronouns, received from the user;
- a historical list of noun references;
- a pronoun cross-reference associating at least one associated pronoun preference with at least one noun reference in said historical list;
- 10 a subsystem adapted for selecting one of said noun references of said historical listing as a function of a comparison between a recognized pronoun with at least one of said associated pronoun preferences in said pronoun cross-reference;
- an application adapted for performing at least one function for said user; and
- utilizing a selected one of said noun references in performing a function of said
- 15 application.